CARRIER FORCE™

SANTA CRUZ MIDWAY SOLOMONS CORAL SEA

48K APPLE®

For the Apple® II with Applesoft ROM card, II Plus, IIe, & IIL

SSI

STRATEGIC SIMULATIONS INC

CARRIER FORCE

SOLITAIRE SIMULATION OF THE SOUTH PACIFIC

SSI

STRATEGIC SIMULATIONS INC

48K APPLE®

For the Apple® II with Applesoft ROM Card
II Plus, IIe & IIc

CARRIER FORCE

4 games in 1: Coral Sea, Midway, Eastern Solomons, Santa Cruz

Accounts for every enemy & plane that participated in the 4 carrier battles. Ship types include CV, BB, CA, CL, CLAA, DD, ML, TR, TK, SS. Plane types include P2A-P4F, P39, SBD, TBD, TBF, B17, B25, B26, VAL, KATE, ZERO, BETTY, SELL, DAUNT

- Plane attrition based on landings in bad weather and at night.
- Possibility of surface combat and submarine attacks.
- Hidden movement, limited intelligence & inaccurate ship sightings.
- Two player and computer as Japanese scenarios.
- Ability to save a game in progress for resumption later.

SSI
STRATEGIC SIMULATIONS INC
48K
APPLE®
For the Apple® II with
Applesoft ROM card,
II Plus, IIe, & IIi.
Plane attrition based on landings in bad weather and at night.
Possibility of surface combat and submarine attacks.
Hidden movement limited intelligence & inaccurate ship sightings.
Two player and computer as Japanese scenarios.
Ability to save a game in progress for resumption later.

CARRIER FORCE

CARRIER FORCE™ was designed by Gary Grigsby, who also designed SSI's GUADALCANAL CAMPAIGN,™ BOMB ALLEY,™ & NORTH ATLANTIC '86.™

PLAYING TIME: 3 to 10 hours.

ADVANCED LEVEL

Box cover design by IMAGE CREATIONS

CARRIER FORCE

HISTORY REPLAYED:

HISTORY:

CARRIER FORCE™

CARRIER FORCE™ was designed by Gary Grigsby and published by SSI's GUADALCANAL CAMPAIGN, BOMB ALLEY, & NORTH ATLANTIC

PLAYING TIME: 5 to 10 hours

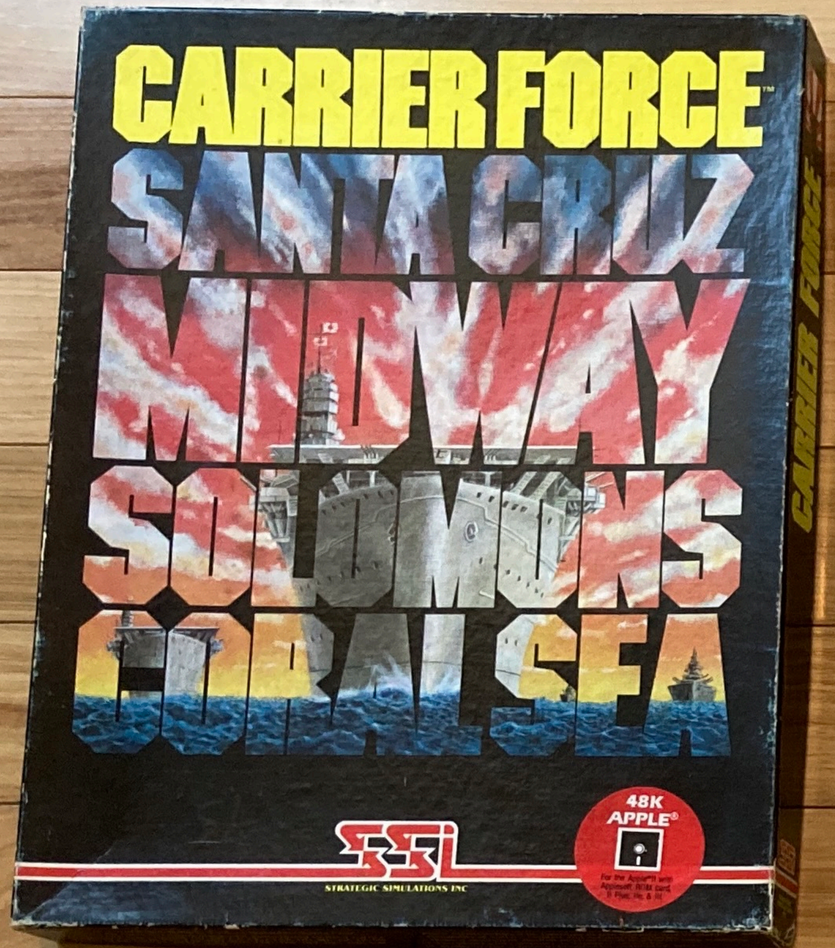
HISTORY:
HISTORY REPLAYED:
the computer plays the Japanese.
AUSTRALIA
CORAL
SEA
SOLOMON ISLANDS
Carrier Yorktown Task Force (later joined by Carrier Lexington)
Above: The actual tracks of U.S. and Japanese carriers during the real Battle of the Coral Sea, May, 1942.
Left: Hi-Res color graphics show the Solomon Islands.
Below: Four sample data displays showing the richness of detail you'll find in CARRIER FORCE.
Aircraft status display for the U.S.
of Midway.
Status display of U.S. airbases and carriers at Midway.
Display of the main Japanese carrier force at Midway
DISPLAYS FROM OTHER COMPUTER(S) MAY VARY.
Apple is a registered trademark of Apple Computer, Inc.
CARRIER FORCE
STRATEGIC SIMULATIONS INC

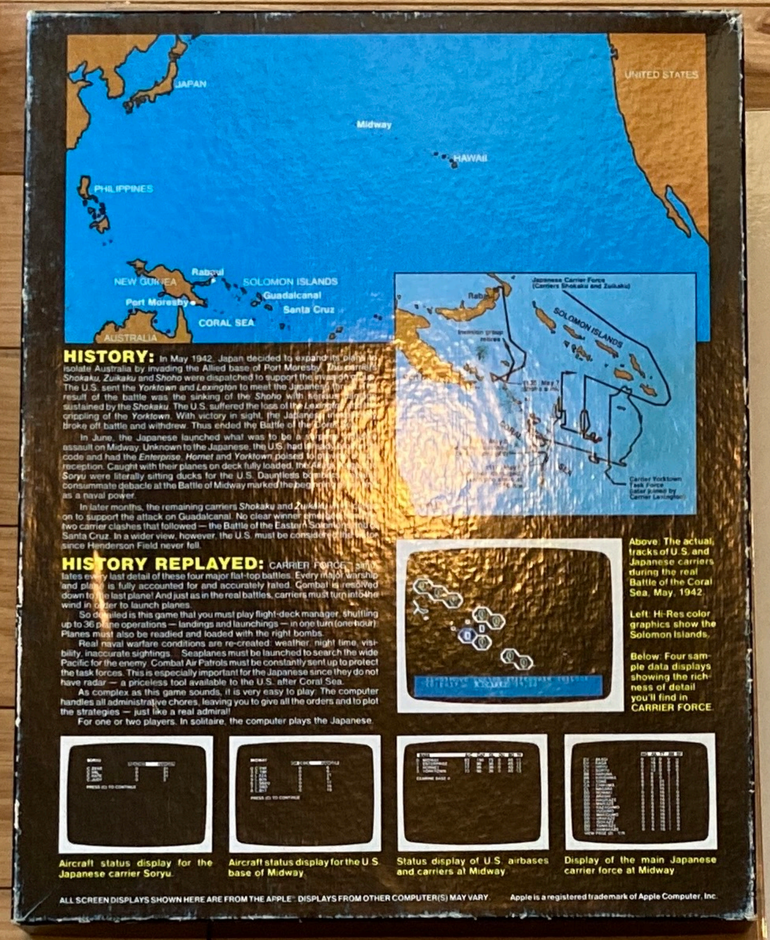
CARRIER FORCE
STRATEGIC SIMULATIONS INC

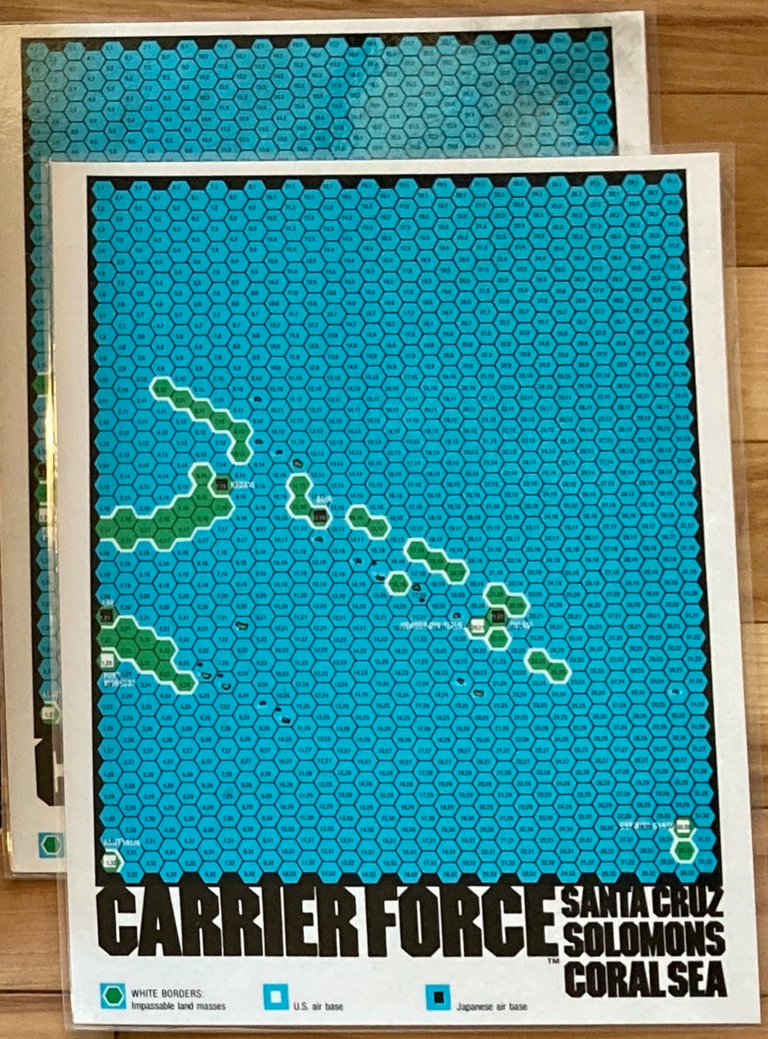
CARRIER FORCE

SSI
CARRIER FORCE

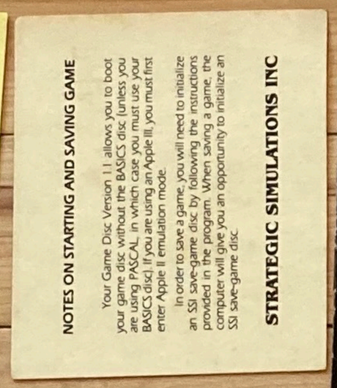
CARRIER FORCE


CARRIER FORCE™
SANTA CRUZ
MIDWAY
SOLOMONS
CORAL SEA
48K APPLE®
SSI
STRATEGIC SIMULATIONS INC

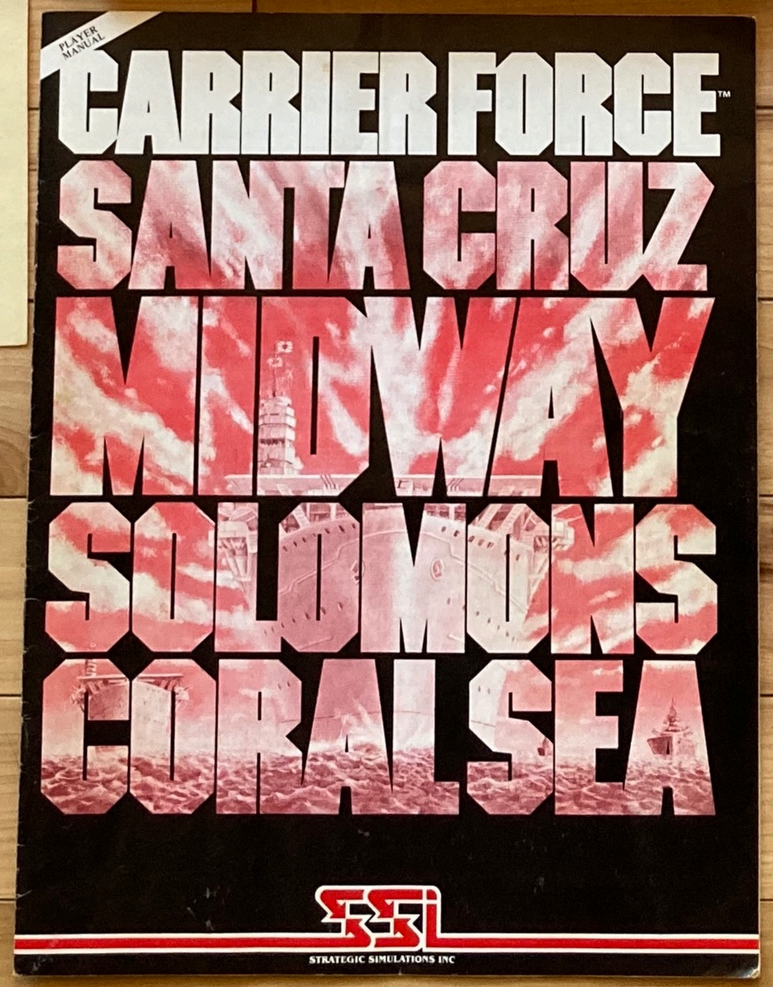

JAPAN
UNITED STATES
Midway
HAWAII
PHILIPPINES
Rabaul
NEW GUINEA
SOLOMON ISLANDS
Guadalcanal
Port Moresby
Santa Cruz
CORAL SEA
AUSTRALIA
HISTORY: In May 1942, Japan decided to expand its
isolate Australia by invading the Allied base of Port Moresby
Shokaku, Zuikaku and Shoho were dispatched to support the
The U.S. sent the Yorktown and Lexington to meet the Japanese
result of the battle was the sinking of the Shoho with
sustained by the Shokaku. The U.S. suffered the loss of the
crippling of the Yorktown. With victory in sight, the Japanese
broke off battle and withdrew. Thus ended the Battle of the
In June, the Japanese launched what was to be a
assault on Midway. Unknown to the Japanese, the U.S. had
code and had the Enterprise, Hornet and Yorktown poised
reception. Caught with their planes on deck fully loaded,
Soryu were literally sitting ducks for the U.S. Dauntless
consummate debacle at the Battle of Midway marked the
as a naval power.
In later months, the remaining carriers Shokaku and Zuikaku
on to support the attack on Guadalcanal. No clear winner
two carrier clashes that followed — the Battle of the Eastern
Santa Cruz. In a wider view, however, the U.S. must be
since Henderson Field never fell.
HISTORY REPLAYED: CARRIER FORCE
lates every last detail of these four major flat-top battles.
land play is fully accounted for and accurately rated.
down to the last plane! And just as in the real battles,
wind in order to launch planes.
So detailed is this game that you must play flight-deck manager, shuttling up to 36 plane operations — landings and launchings — in one turn (one hour). Planes must also be readied and loaded with the right bombs.
Real naval warfare conditions are re-created: weather, night time, visibility, inaccurate sightings. Seaplanes must be launched to search the wide Pacific for the enemy. Combat Air Patrols must be constantly sent up to protect the task forces. This is especially important for the Japanese since they do not have radar — a priceless tool available to the U.S. after Coral Sea.
As complex as this game sounds, it is very easy to play. The computer handles all administrative chores, leaving you to give all the orders and to plot the strategies — just like a real admiral!
For one or two players. In solitaire, the computer plays the Japanese.
Japanese Carrier Force (Carriers Shokaku and Zuikaku)
Rabaul
SOLOMON ISLANDS
Carrier Yorktown task force (also joined by Carrier Lexington)
Above: The actual tracks of U.S. and Japanese carriers during the real Battle of the Coral Sea, May, 1942.
Left: Hi-Res color graphics show the Solomon Islands.
Below: Four sample data displays showing the richness of detail you'll find in CARRIER FORCE
Aircraft status display for the Japanese carrier Soryu.
Aircraft status display for the U.S. base of Midway.
Status display of U.S. airbases and carriers at Midway.
Display of the main Japanese carrier force at Midway.
ALL SCREEN DISPLAYS SHOWN HERE ARE FROM THE APPLE™ DISPLAYS FROM OTHER COMPUTER(S) MAY VARY.
Apple is a registered trademark of Apple Computer, Inc.


CARRIER FORCE
SANTA CRUZ
SOLOMONS
CORAL SEA
WHITE BORDERS:
Impassable land masses
U.S. air base
Japanese air base

BUSINESS REPLY CARD
FIRST CLASS PERMIT NO. 910, MOUNTAIN VIEW, CA 94042
POSTAGE WILL BE PAID BY ADDRESSEE
NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES
STRATEGIC SIMULATIONS INC.
883 Stierlin Road, Building A-200
Mountain View, CA 94043-9986


NOTES ON STARTING AND SAVING GAME
Your Game Disc Version 1.1 allows you to boot your game disc without the BASICS disc (unless you are using PASCAL, in which case you must use your BASICS disc). If you are using an Apple III, you must first enter Apple II emulation mode.
In order to save a game, you will need to initialize an SSI save-game disc by following the instructions provided in the program. When saving a game, the computer will give you an opportunity to initialize an SSI save-game disc.
STRATEGIC SIMULATIONS INC

APPLE®
CARRIER FORCE
© 1983 by Gary Grigsby. All rights reserved.
STRATEGIC SIMULATIONS INC


PLAYER MANUAL
CARRIER FORCE™
SANTA CRUZ
MIDWAY
SOLOMONS
CORAL SEA
STRATEGIC SIMULATIONS INC

Berol Brundell China Warrior

SSI
STRATEGIC SIMULATIONS INC
CARRIER FORCE
COMPUTER BASEBALL
QUESTRON
PRESIDENT ELECT
WAR IN RUSSIA
OBJECTIVE: KURSK
RINGS WEST
COMPUTER QUARTERBACK
KNIGHTS OF THE DESERT
NORTH ATLANTIC '86
FALL 1984 CATALOG

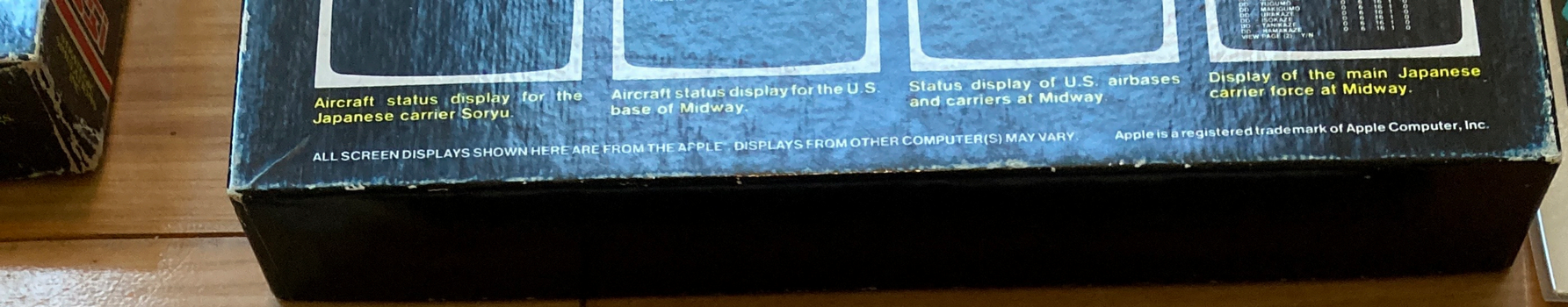
APPLE®

CARRIER FORCE™

© 1983 by Gary Grigsby. All rights reserved.

SSI

STRATEGIC SIMULATIONS INC



Aircraft status display for the Japanese carrier Soryu.

Aircraft status display for the U.S. base of Midway.

Status display of U.S. airbases and carriers at Midway

Display of the main Japanese carrier force at Midway.

ALL SCREEN DISPLAYS SHOWN HERE ARE FROM THE APPLE™. DISPLAYS FROM OTHER COMPUTER(S) MAY VARY.

Apple is a registered trademark of Apple Computer, Inc.

STRATEGIC SIMULATIONS INC

SSI save-game disc.

PLAYER MANUAL

CARRIER FORCE™

SANTA CRUZ

MIDWAY

SOLOMONS

CORAL SEA

STRATEGIC SIMULATIONS INC

WHITE BORDERS:
Impassable land masses

U.S. air base

FORCE™
CRUZ
WAY
LSEA

INC

Berol Blaisdell CHINA MARKER BLACK 173 T

COMPUTER QUARTERBACK

KNIGHTS OF THE DESERT

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 910, MOUNTAIN VIEW, CA 94042

POSTAGE WILL BE PAID BY ADDRESSEE

STRATEGIC SIMULATIONS INC.
883 Stierlin Road, Building A-200
Mountain View, CA 94043-9986

NOTES ON STARTING AND SAVING GAME

Your Game Disc Version 1.1 allows you to boot your game disc without the BASICS disc (unless you are using PASCAL, in which case you must use your BASICS disc). If you are using an Apple III, you must first enter Apple II emulation mode.

In order to save a game, you will need to initialize an SSI save-game disc by following the instructions provided in the program. When saving a game, the computer will give you an opportunity to initialize an SSI save-game disc.

STRATEGIC SIMULATIONS INC

APPLE®

CARRIER FORCE™

© 1983 by Gary Grigsby. All rights reserved.

STRATEGIC SIMULATIONS INC

PLAYER MANUAL

CARRIER FORCE

AIRCRAFT CHARACTERISTICS

AIRCRAFT TYPE	MAX SPEED	AIRCRAFT ENDURANCE	BOMBER ACCURACY	AIR-TO-AIR COMBAT ATTACK	AIR-TO-AIR COMBAT SURVIVE
C.ZEKE	4	4	–	20	20
L.ZEKE	4	9	–	17	17
VAL	4	4	15*	(2)	3
KATE	4	4	7/3*	(2)	3
BETTY	4	12	4/2	(2)	3
NELL	3	10	1	(2)	3
JUDY	4	4	–	(2)	5
F4F	4	3	–	17	20
F2A	4	3	–	10	5
P39	5	2	–	12	10
SBD	4	3	9*	(4)	9
SB2U	3	4	1	(1)	1
TBD	3	3	2/1	(1)	1
TBF	4	4	2/1	(4)	8
B26	4	5	1	(5)	10
B25	4	6	1	(5)	10
B17	4	10	1	(12)	25
A24	4	3	1	(4)	9
SEAPLANE	3	6,18	–	(0)	0

( ) = defensive fire only
/ = torpedo/high explosive bomb
, = ship-based, land-based

*In the Midway scenario the land based SBDs have an accuracy of 1. The land based VALs and KATEs are 50% as accurate as the carrier based versions.

AIRCRAFT CLASSIFICATION

FIGHTERS: ZEKE, F4F, F2A, P39
DIVE BOMBERS: VAL, SBD, SB2U, A24
TORPEDO BOMBERS: KATE, TBD, TBF
* **LEVEL BOMBERS**: BETTY, NELL, B17, B25, B26
RECONNAISSANCE: JUDY

* Although the BETTY and B26 may sometimes carry torpedoes, they are still *classified* as level bombers.

PILOT ABILITY

SCENARIO	U.S. PILOTS	JAPANESE PILOTS
Coral Sea	–1	–1
Midway	0	+1
Eastern Solomons	+1	0
Santa Cruz	+1	0

MINIMUM OPERATION LIMITS

Akagi	12	Lexington	12
Kaga	12	Saratoga	12
Hiryu	12	Yorktown	12
Soryu	12	Enterprise	12
Shokaku	12	Hornet	12
Zuikaku	12	Wasp	11
Junyo	9		
Shoho	6		
Zuiho	6		
Ryujo	6		
Hosho	3		

SHIP DAMAGE

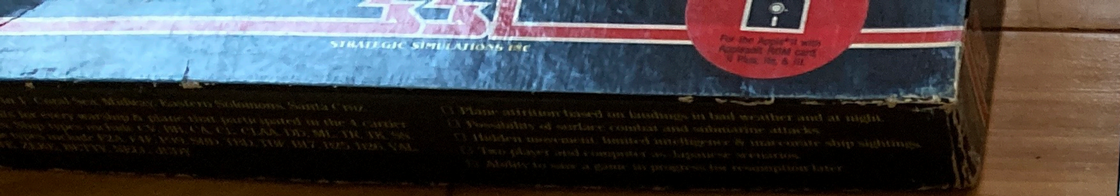
AA gun	1	American BB main gun	8
CL main gun	1	21 torpedo	5
CA main gun	2	24 torpedo	7
YAMATO main gun	9	AP-bomb	4
NAGATO, MUTSU main gun	7	HE-bomb	2
Other Japanese BB main gun	6		

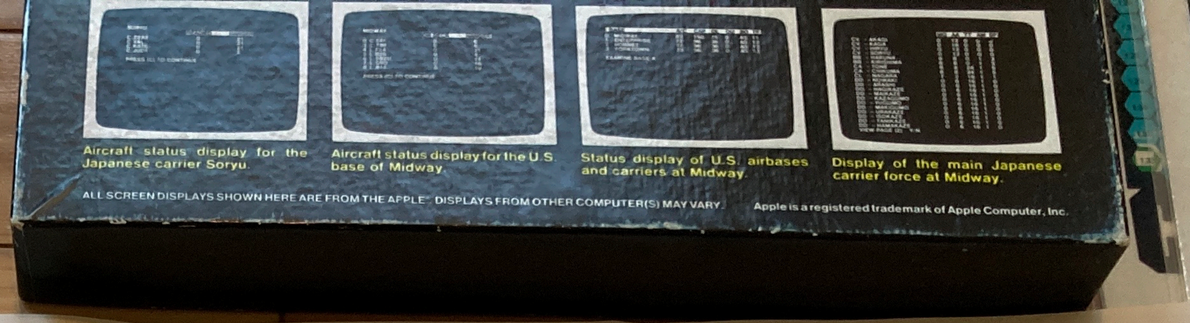
STRATEGIC SIMULATIONS INC

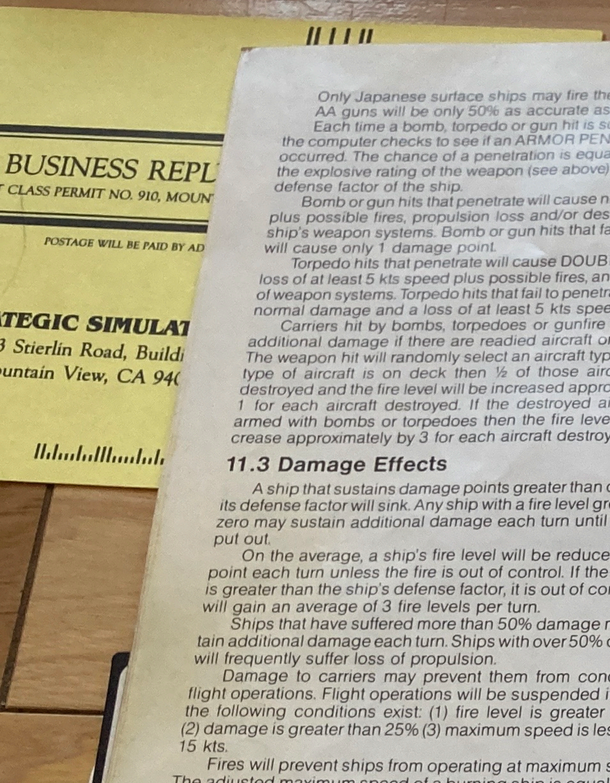
...NG AND SAVING GAME

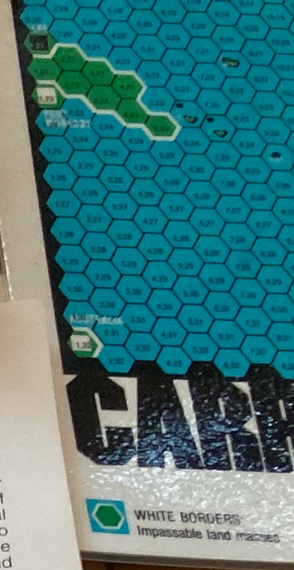
Your Game Disc Version 1.1 allows you to boot your game disc without the BASICS disc (unless you are using PASCAL, in which case you must use your BASICS disc). If you are using an Apple III, you must first enter Apple II emulation mode.

In order to save a game, you will need to initialize an SSI save-game disc by following the instructions provided in the program. When saving a game, the computer will give you an opportunity to initialize an SSI save-game disc.




Aircraft status display for the Japanese carrier Soryu.
Aircraft status display for the U.S. base of Midway.
Status display of U.S. airbases and carriers at Midway.
Display of the main Japanese carrier force at Midway.
ALL SCREEN DISPLAYS SHOWN HERE ARE FROM THE APPLE. DISPLAYS FROM OTHER COMPUTER(S) MAY VARY.
Apple is a registered trademark of Apple Computer, Inc.





Only Japanese surface ships may fire the 24' torpedo.

AA guns will be only 50% as accurate as main guns.

Each time a bomb, torpedo or gun hit is scored on a ship, the computer checks to see if an ARMOR PENETRATION has occurred. The chance of a penetration is equal to three times the explosive rating of the weapon (see above) divided by the defense factor of the ship.

Bomb or gun hits that penetrate will cause normal damage plus possible fires, propulsion loss and/or destruction of the ship's weapon systems. Bomb or gun hits that fail to penetrate will cause only 1 damage point.

Torpedo hits that penetrate will cause DOUBLE damage, a loss of at least 5 kts speed plus possible fires, and destruction of weapon systems. Torpedo hits that fail to penetrate will cause normal damage and a loss of at least 5 kts speed.

Carriers hit by bombs, torpedoes or gunfire may sustain additional damage if there are readied aircraft on the decks. The weapon hit will randomly select an aircraft type and if that type of aircraft is on deck then ½ of those aircraft will be destroyed and the fire level will be increased approximately by 1 for each aircraft destroyed. If the destroyed aircraft were armed with bombs or torpedoes then the fire level would increase approximately by 3 for each aircraft destroyed.

11.3 Damage Effects

A ship that sustains damage points greater than or equal to its defense factor will sink. Any ship with a fire level greater than zero may sustain additional damage each turn until the fire is put out.

On the average, a ship's fire level will be reduced by one point each turn unless the fire is out of control. If the fire level is greater than the ship's defense factor, it is out of control and will gain an average of 3 fire levels per turn.

Ships that have suffered more than 50% damage may sustain additional damage each turn. Ships with over 50% damage will frequently suffer loss of propulsion.

Damage to carriers may prevent them from conducting flight operations. Flight operations will be suspended if any of the following conditions exist: (1) fire level is greater than 4 (2) damage is greater than 25% (3) maximum speed is less than 15 kts.

Fires will prevent ships from operating at maximum speed. The adjusted maximum speed of a burning ship is equal to the maximum speed minus the fire level.

11.4 Base Damage

Bases may suffer damage if subjected to bombing or coastal bombardment. Bases suffer 1-2% damage each time they are hit.

At the end of each turn bases will repair 10% of their damage. Bases with over 25% damage will be unable to operate aircraft. In the Midway scenario, Japanese transports may not unload on Midway unless there is 50% or more damage on the base.

EXAMPLE: A base with 40% damage will repair to 36% damage after one turn.

11.5 Weather

The two elements of weather that affect game operations are WIND DIRECTION and CLOUD COVER. Wind direction affects the ability of carriers to launch and recover aircraft, while cloud over affects the ability of air missions to locate enemy TFs/bases.

The weather conditions are subject to change at the start of each turn. There is a 20% chance that the wind direction will change (the new direction is determined randomly). Cloud cover may vary by plus or minus 25% each turn.

The ability of aircraft to locate enemy TFs and bases is reduced by the cloud cover percentage. Also the number of ships spotted in the SIGHTING REPORT will be reduced by the cloud cover percentage.

11.6 Non-Combat Aircraft Losses

Air missions are subject to non-combat losses each time they enter a landing pattern. In daylight with 0% overcast air missions will average 0.5% (each aircraft has 1 chance in 200) losses per landing. Losses are increased by 1% for every 10% of cloud cover and by 10% if it is a NIGHT turn.

EXAMPLE: On a night turn with 40% overcast the loss rate will be 14.5%.

11.7 Scenario Duration

The computer is programmed to end each scenario on a particular date:

CORAL SEA	8 MAY 42
MIDWAY	7 JUN 42
EASTERN SOLOMONS	25 AUG 42
SANTA CRUZ	27 OCT 42

For each scenario the game will automatically end at the completion of the 2100-hour turn.

11.8 Aircraft Classification

Aircraft used in the game are classified as follows:
FIGHTERS: ZEKE, F4F, F2A, P39
DIVE BOMBERS: VAL, SBD, SB2U, A24
TORPEDO BOMBERS: KATE, TBD, TBF
LEVEL BOMBERS: BETTY, NELL, B17, B25, B26
RECONNAISSANCE: JUDY

Although the BETTY and B26 may sometimes carry torpedoes they are still CLASSIFIED as level bombers.

11.9 Aircraft Base Restrictions

Aircraft with a name prefix of "C." are carrier based aircraft. Aircraft with a name prefix of "L." are land based. Carrier based aircraft may operate from either carrier of land bases. Land based aircraft may never land on a carrier.

Aircraft classified as level bombers may not be READIED at a base with an operation limit less than 60.

11.10 Radar

During all scenarios, the American player will receive radar reports of Japanese air missions in the same hex with friendly TFs. Radar reports will be rough estimates (usually exaggerated) of the number of aircraft in the enemy air mission. Radar may occasionally fail to detect some enemy missions (the chance of failure varies with the size of the mission).

11.11 Pilot Ability

The differing abilities of the pilots in the four scenarios is accounted for by altering bomber accuracy and air-attack and survivability ratings as follows:

SCENARIO	US PILOTS	JAPANESE PILOTS
Coral Sea	−1	−1
Midway	0	+1
Eastern Solomons	+1	0
Santa Cruz	+1	0

12.0 SCORING

At the end of the game the players score points for sinking and damaging enemy ships/bases and points for each surviving combat aircraft. The Japanese player scores points for successfully unloading "assault points" at an enemy base.

12.1 Sunk Ships

Points awarded for sinking enemy ships equals TWO X DEFENSE FACTOR. If enemy carriers have been sunk additional points are awarded equaling the aircraft capacity of the carrier. If Midway is captured the Japanese player receives points as if he had "sunk" a carrier with a defense factor of 80 and a capacity of 150 (310 points).

12.2 Damaged Ships/Bases

Points received for damaging enemy ships/bases equals 1 per damage point plus 1 per fire level (your opponent may score more points if you let your ship burn than if you SCUTTLE it) . . .

12.3 Surviving Aircraft

One point is scored for each friendly combat aircraft ON A CARRIER OR BASE at the end of the game.

12.4 Japanese Assault Points

One point is received for each Japanese assault point unloaded at an enemy base.

12.5 Handicap Points

The Japanese player will receive 100 points in the Eastern Solomons scenario. The U.S. player will receive 100 points in the Santa Cruz scenario.

13.0 VICTORY CONDITIONS

At the end of the game victory points will be calculated and the level of victory will be determined by comparing the scores of the two players.

13.1 Victory Levels

Subtract the Japanese Victory Points from the American Victory Points and compare the results to the following table to determine the victory level:

600 and up	American Decisive Victory
300 to 599	American Substantive Victory
100 to 299	American Marginal Victory
−99 to 99	Draw
−299 to −100	Japanese Marginal Victory
−599 to −300	Japanese Substantive Victory
−600 or less	Japanese Decisive Victory

14.0 SOLITAIRE PLAY

When playing solitaire games the computer will command the Japanese forces. There are 4 levels of solitaire difficulty. The level of difficulty is determined when starting a new game and may be altered when restarting a saved game. As the level number is decreased the Japanese forces will perform searches more efficiently. These levels may be used to handicap a two player game if desired. Level 3 is considered the "historical" level.

It is possible to start a game in solitaire mode, save it, and then restart it as a two-player game. To do this, set the main menu to two-player mode before reloading the saved game data.

It is possible to save a two player game and restart it as a solitaire game. This should only be done experimentally as the computer may be confused by many human devised deployments.

15.0 STRATEGY NOTES

15.1 Task Force Movement

Each turn the players will have the chance to change a TF's direction. The TF will move automatically when it accumulates 50 or more movement points. Carrier TFs that are conducting air operations will move very slowly unless they are facing the same direction that the wind is blowing from. The loss of movement points is caused by the carriers alternating between their assigned course and the "WIND FROM" direction to launch/recover aircraft.

15.2 Searching

Searches should be performed by seaplanes whenever possible. Searches are necessary to pinpoint the location of enemy TFs so that they may be attacked. When the general location of the enemy carriers is unknown, then it is important to concentrate the search planes in the areas surrounding the friendly carriers. The total number of search missions should seldom exceed 7 or 8.

15.3 Fighter Patrols

Fighter patrols may be used to attack enemy seaplanes and bomber groups that enter their patrol area. During daylight turns, carrier TFs should maintain at least one fighter mission airborne at all times to shoot down enemy seaplanes. On turns when enemy bomber attacks are expected, the carrier TFs should maintain at least half of their fighter strength in protective fighter patrols. In scenarios where the U.S. player has radar, the carriers can launch 40 to 60 fighters on the turn the incoming bombers are *detected*.

15.4 Bomber Missions

When launching bomber missions, the crucial factors are (1) the number of fighter escorts included and (2) the total number of aircraft formed into each mission. As a rule of thumb a bomber mission should include at least 1 fighter for every 3 bombers to prevent the bombers from being slaughtered by enemy fighter patrols. Bomber missions attacking targets at *normal* range should form large groups of bombers and escorts. Bomber groups attacking targets at *extended* range should form several smaller groups of less than 15 aircraft each. Extended range for Japanese bombers is 6 or 7 hexes. Extended range for U.S. bombers is 4 or 5 hexes.

15.5 Carrier Operations

Carrier operations consist of launching and recovering aircraft. Carriers are limited in the number of operations they may perform each turn due to their limited space. Carriers that "spend" too many of their operations launching aircraft may be unable to recover aircraft on the same turn. Likewise carriers with overcrowded decks (aircraft on deck exceed minimum operation limit) will also be unable to recover aircraft on the same turn. On turns when a large number of aircraft are in landing patterns, the receiving carriers should turn into the wind and clear the decks of excess aircraft. The total aircraft launched should be regulated to insure sufficient remaining operations to land all of the aircraft.

15.6 Coral Sea

The JAPANESE PLAYER should move the transport TFs to Port Moresby and unload the troops. The Japanese carrier TFs should hang near the transport TFs and bomb any U.S. TF that moves into range. Land-based aircraft should concentrate on bombing Port Moresby to reduce the U.S. air presence near the invasion site.

The U.S. PLAYER can get some early target practice using Yorktown's airgroups to bomb the small Japanese TF at Tulagi. The two U.S. carrier groups should rendezvous by the end of the first day and move west during the night hours. The U.S. cruiser TF should move Northwest and attempt to engage the Japanese Transport TFs in daylight surface combat. Weather permitting, a major carrier engagement should occur on the second or third day of the game.

.2 A

Abbreviations used in the game are listed below.

CV aircraft carrier
CVL light aircraft carrier
BB battleship
CA heavy cruiser
CL light cruiser
CLAA anti-aircraft cruiser
CS seaplane carrier
AV seaplane tender
DD destroyer
DE destroyer escort
PD patrol boat
minelayer
MW minesweeper
transport
tanker/oiler
submarine

main guns
anti-aircraft guns
torpedoes
bombardment ammunition
seaplanes
maximum speed
assault points
damage percentage
re level
ase capacity
craft
eration limit
erations used
ber ordnance
force

ENCE OF PLAY

is a two-sided game: American vs.
an forces must be commanded by
anese forces may be commanded by
mputer.

tion Phase

ection phase, the player(s) select a
conditions under which the game
ersion the set-up may be changed
nbers:

e
es

ntering the following numbers:

3.2 Historical Set-Up

At the start of each game the computer will assign all ships and aircraft to their historical locations prior to the battle.

3.3 Random Set-Up

The players may randomize the set-up somewhat in all scenarios except CORAL SEA. In the MIDWAY scenario both American and Japanese carrier TFs will have their historical locations altered. In EASTERN SOLOMONS and SANTA CRUZ all Japanese TFs will have their locations altered.

3.4 Sequence of Play

1. American TF Adjustment Phase
2. Japanese TF Adjustment Phase
3. Japanese Adjust TF Heading
4. Japanese Launch Air Missions
5. Japanese Arm & Fuel Aircraft
6. Japanese Land Aircraft
7. Japanese Move Air Missions
8. American Radar Report
9. American Adjust TF Heading
10. American Launch Air Missions
11. American Arm & Fuel Aircraft
12. American Land Aircraft
13. American Move Air Missions
14. Combat Resolution Phase
15. Save-Game Phase

3.5 Keeping Time

Each game turn represents one hour. At the start of each turn the clock, calendar and weather are adjusted to reflect the passage of time and the changing battle conditions. Daylight hours are 600 to 1800 (inclusive).

4.0 TASK FORCE ADJUSTMENT PHASE

During the task force adjustment phase the computer will display a menu listing two options for adjusting the composition of your task forces and five options for viewing the current status of your forces. To enter the desired routine just press the corresponding numbered key.

4.1 Dividing Task Forces

Enter the number of the task force you wish to divide. The computer will list the ships in the selected task force and display their maximum speed, damage and fire levels.

The maximum number of task forces that the Japanese player may use is equal to 10 minus the number of Japanese land bases for that scenario. The maximum number of task forces that the American player may use is equal to 9 minus the

4.2 Transferring Ships

Enter the numbers of the "gaining" and "losing" task forces The two task forces must occupy the same hexagon on the ma

The procedure for transferring ships is the same as d scribed in 4.1. A task force may never contain more than 20 shi

When a ship transfer occurs, the gaining task force's mo ment points will be adjusted to equal that of either the gainin losing task force (whichever is lowest).

4.3 Ending the Game

Both players should agree before ending the gam computer will display the final score and a list of all ship during play.

4.4 The Map Display

The maps used in Carrier Force employ a hexag hexes high by 31 hexes wide. Only a fraction of the ma high by 13 hexes wide) can be viewed at one time. B the keys 1-6 the cursor can be moved around the 2-NE, 3-SE, 4-S, 5-SW, 6-NW). If the cursor is moved of the display then the map display will scroll hidden portions of the map.

American task force symbols will be colo Japanese task force symbols will be colored Apple computer American task forces that occu base hex will be colored purple; Japanese occupy an island or base hex will be colored and Japanese TFs stacked together will have To check the friendly task force numbers in by the cursor press the (8)LOOK key. To return press the (0)EXIT key.

5.0 TASK FORCE M

Task force movement occurs at the after all combat has been resolved. accumulated 50 or more movement p (the direction of movement is deter heading). A task force that moves will its movement point total.

5.1 Fleet Speed

At the start of each turn a tas points equal to its fleet speed. The 30 OR the maximum speed of the which ever is lower.

5.2 Loss of Movement

During the course of each certain actions that will cause task force that changes headi points for each compass poi point total will never be redu when changing direction).

5.3 Movement Restrictions

A task force may never move through a white hexside, but instead will continue to accumulate movement points up to a maximum of 79. A task force may move off the edge of the map (it will not be allowed to return).

6.0 LAUNCHING AIR MISSIONS

Land bases and aircraft carriers may launch fighter and bomber missions. Land bases and Japanese BB, CA, CL, CS and AV type ships may launch seaplane missions. Each player may have a maximum of 20 air missions active at any one time.

6.1 Seaplane Missions

A seaplane mission consists of one seaplane with the single function of searching for enemy ships. Ship launched seaplanes have an endurance of 6 turns. Land based seaplanes have an endurance of 18 turns. Seaplanes may only be recovered by the ship/base from which they were launched. Launching or recovering seaplanes does not count against a base's OPERATION LIMIT.

6.2 Combat Missions

The type of mission that may be flown by combat aircraft is determined by the type of aircraft included and/or the type of ordnance being carried. Listed below are the types of missions and their descriptions:

F *(fighter patrol)*
Consists entirely of fighter type aircraft. Used to protect friendly bases or task forces.

AS *(anti-ship)*
Consists of bombers carrying torpedoes and/or armor piercing bombs. May not be used to attack enemy bases. May include a fighter escort.

HE *(high-explosive)*
Consists of bombers carrying high explosive bombs. Best suited for attacking enemy bases. May attack enemy ships at reduced effectiveness. May include a fighter escort.

N *(not armed)*
Consists of unarmed bombers that have completed/aborted their mission or were launched for search only. May include a fighter escort. Also may consist of unarmed Judy reconnaissance planes without a fighter escort.

In order to launch an AS mission, the bombers must have been readied during a previous turn with AS ordnance. In order to launch an HE mission, the bombers must have been readied during a previous turn with HE ordnance.

6.3 Operation Limits

Each base and carrier is assigned a limit to the number of aircraft it may launch and land in one turn (each aircraft launched or landed equals one flight operation). Carriers have a flexible operation limit that varies with the carrier TF heading in relation to the wind direction. The land base operation limits never change.

If a carrier TF heading is TWO or more compass points different from the wind direction then the carrier must conform to its MINIMUM OPERATION LIMIT for that turn. If a carrier TF heading is ONE compass point different from the wind direc-

The intermediate operation limit will always be DOUBLE the minimum operation limit. The maximum operation limit will always be TRIPLE the minimum operation limit.

Listed below are the MINIMUM operation limits for carriers included in the game:

Akagi	12	Lexington	12 -24-36
Kaga	12	Saratoga	12
Hiryu	12	Yorktown	12
Soryu	12	Enterprise	12
Shokaku	12	Hornet	12
Zuikaku	12	Wasp	11
Junyo	9		
Shoho	6		
Zuiho	6		
Ryujo	6		
Hosho	3		

If for any reason during a turn an aircraft carrier is unable to conduct further air operations then its operations used (OU) will be set to 99.

6.4 Forming Air Missions

Air missions may be formed from available seaplanes or readied combat aircraft. It is possible to form a new mission from one carrier/base and then reinforce it with aircraft from another carrier/base within the same hex. When reinforcing a mission that has been in the air for one or more turns the reinforcing aircraft will be assumed to have been in the air as long as the original aircraft. Bombers carrying AS ordnance may not be combined in the same mission as bombers carrying HE ordnance. Air missions cannot be split up after they have formed.

Large air missions will suffer a movement point loss on the turn they are launched. Missions that have been in the air for one or more turns will suffer no movement loss if reinforced.

There is a loss of one movement point for approximately every 15 planes in the mission (this will vary randomly) plus the loss of one MP automatically on the first turn a mission is in the air. A maximum of 3 movement points may be lost in this manner.

7.0 ARMING & FUELING AIRCRAFT

Combat aircraft must be armed & fueled (readied) and moved on to the deck/runway before they may be launched on air missions.

7.1 Bomber Ordnance Selection

A bomber ordnance selection (AS, HE or N) must be made for each carrier and base. All bombers readied on a carrier or base will be armed with the selected ordnance type.

7.2 Deck/Runway Capacity

The deck/runway capacity for a carrier/base represents the maximum number of aircraft that may be readied at one time (readied aircraft are always considered to be on the deck/runway). The deck/runway capacity is equal to the carrier/base MAXIMUM OPERATION LIMIT.

During the air movement phase air miss
search, initiate combat and/or enter a land
missions movement is completed sequentiall
mission number.

8.1 Air Mission Status Display

Prior to moving each air mission the pl
status display for that mission. The status d

(1) mission location
(2) mission number
(3) time in the air
(4) quantity of each type of aircraft
(5) ordnance carried by each aircraft ty
(6) air time remaining for each aircraft

For bomber type missions you will
ordnance" before moving the air missio
units movement allowance by 1.

8.2 Air Move Display

After exiting the mission status
drawn on the screen with the curs
location of the air mission. The menu
will indicate the players options:

(1) move north
(2) move northeast
(3) move southeast
(4) move south
(5) move southwest
(6) move northwest
(7) land
(8) search current hex using a
(9) identify TF numbers of frie
(0) search current hex using

Also displayed is the air
nates and its remaining MO
Seaplane (SP) missions
immediately if their home b
missions that select option
a friendly base is in the sa

8.3 Searching

Each time an air miss
enemy TFs in that hex. An
without moving by using
overcast weather an air
each enemy TF in the h
searching that hex (1
chance of locating ass
the chance may be as
further lower the % ch
Only HE missions
missions may fly at

8.4 Sighting R

When an air mi
receive a "sighting
type abbreviations
not be entirely acc
non-bomber miss
previously locate
given the option

ALL SCREEN DISPLAYS SHOWN HERE ARE FROM THE APPLE

always be DOUBLE
m operation limit will
limit.
on limits for carriers

12 -24-36
12
12
12
12
11

nable to
OU) will

s or
ion
om
ng
e
s

8.0 AIR MOVEMENT

During the air movement phase air missions may move, search, initiate combat and/or enter a landing pattern. Air missions movement is completed sequentially according to air mission number.

8.1 Air Mission Status Display

Prior to moving each air mission the players may view the status display for that mission. The status display lists the data:

(1) mission location
(2) mission number
(3) time in the air
(4) quantity of each type of aircraft
(5) ordnance carried by each aircraft type
(6) air time remaining for each aircraft type

For bomber type missions you will be allowed to "jettision ordnance" before moving the air mission. This increases the air units movement allowance by 1.

8.2 Air Move Display

After exiting the mission status display, the map will be drawn on the screen with the cursor indicating the current location of the air mission. The menu at the bottom of the screen will indicate the players options:

(1) move north
(2) move northeast
(3) move southeast
(4) move south
(5) move southwest
(6) move northwest
(7) land
(8) search current hex using all remaining move points
(9) identify TF numbers of friendly TFs in same hex
(0) search current hex using only 1 move point

combat. The chance of initiating combat varies with the size of friendly and enemy air missions and the weather. Air-to-air combat will only occur if one of the air missions involved is a fighter patrol (F).

If a fighter mission expends movement points in a hex containing enemy aircraft then it may only engage the enemy missions armed with bombs. If a non-fighter mission expends move points in a hex containing enemy aircraft then it may only engage the enemy fighter missions in the hex.

When opposing air missions engage in combat the mission with the fewest aircraft will be unable to move any further that turn.

8.6 Movement Points

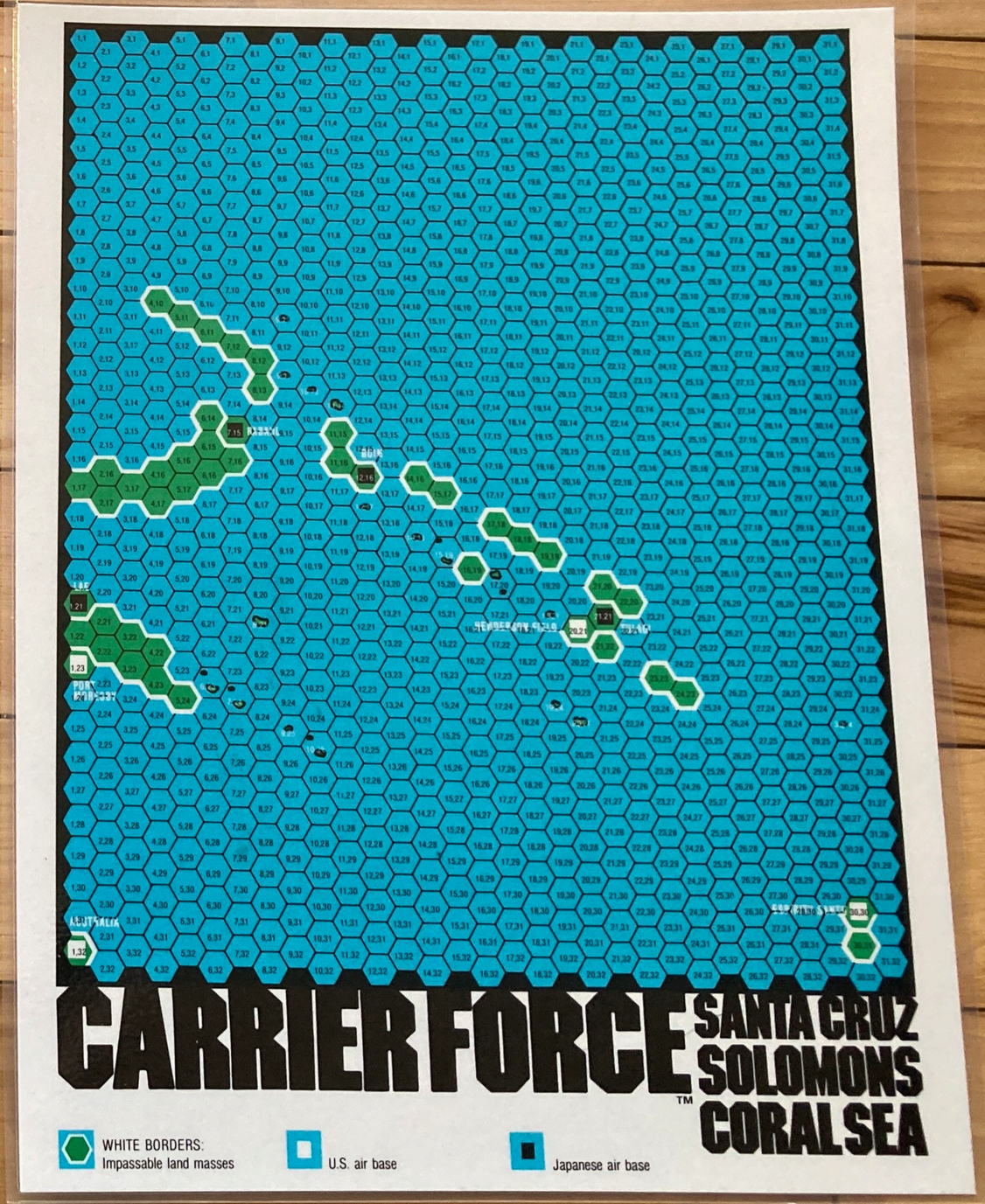
An air mission assumes the speed of the slowest aircraft type included in the mission. One movement point is subtracted from the speed if any of the aircraft in the mission are carrying bombs or torpedoes. If a bomber mission declares an attack before it has used all of its movement points then the unused points will be added to its next turn's move.

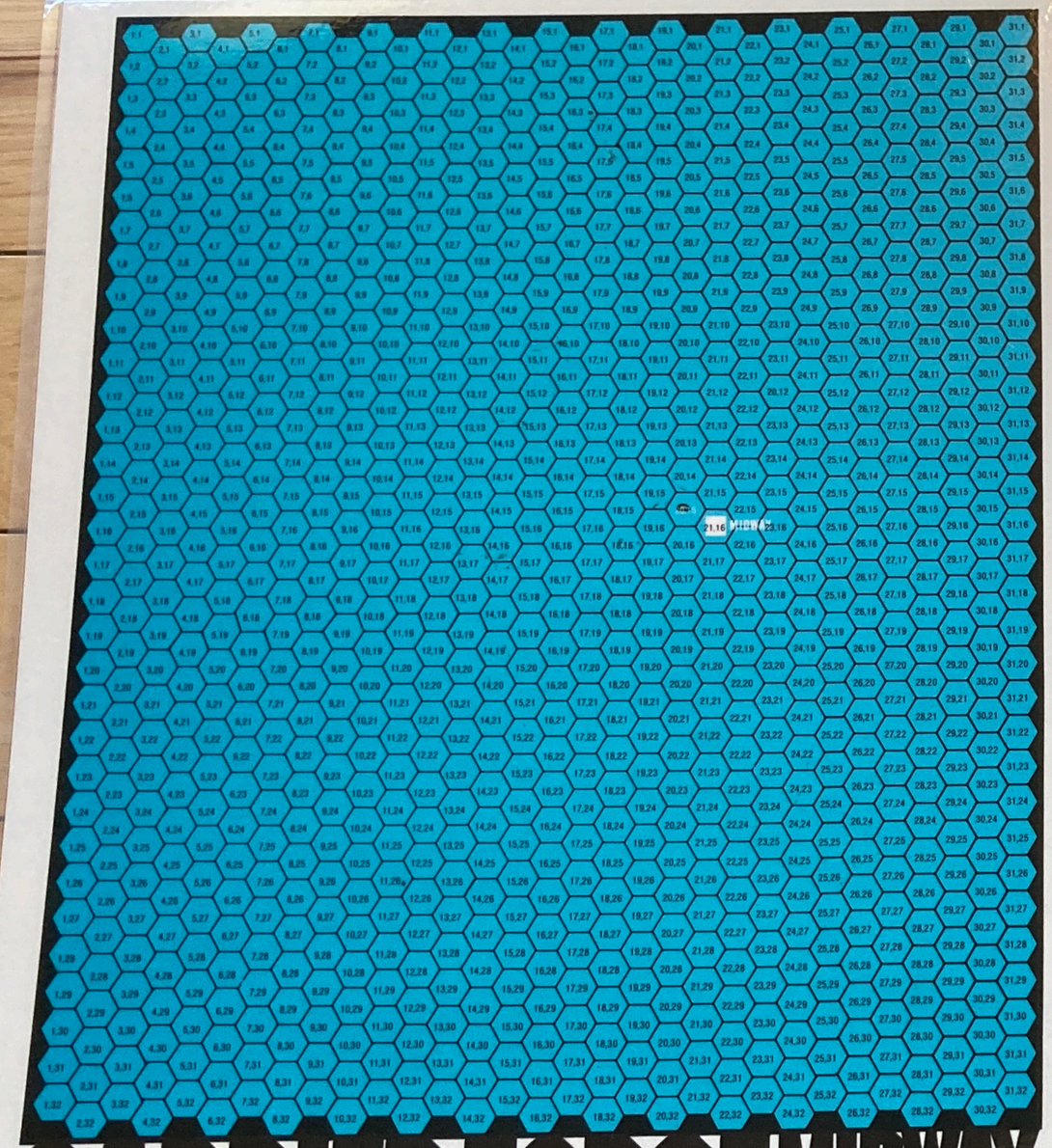
Listed below are the maximum speeds of the aircraft in the game:

ZEKE	4	SBD	4
VAL	4	SB2U	3
KATE	4	TBD	3
BETTY	4	TBF	4
NELL	3	B26	4
JUDY	4	B25	4
F4F	4	B17	4
F2A	4	A24	4
P39	5	SEAPLANE	3

(1) Form 20 SBD Plane strike. Loss of 1 MP due to size of strike. Automatic loss of 1 MP from take-off (total loss of 2MP).
(2) Movement during first turn in air.
(3) Movement during second turn

STRATEGIC SIMULATIONS INC

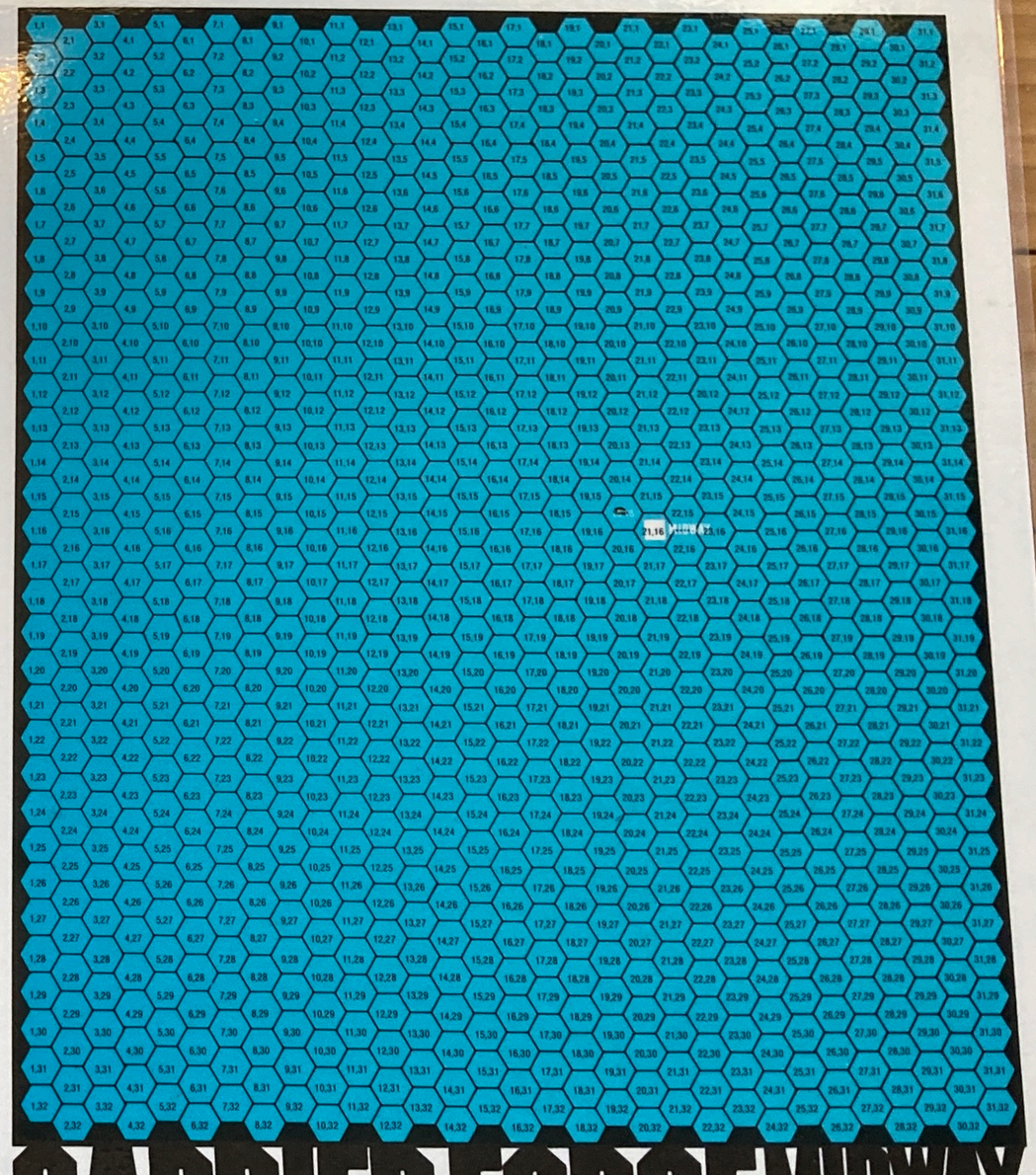




CARRIER FORCE™ MIDWAY

STRATEGIC SIMULATIONS INC

© 1983. All rights reserved.



CARRIER FORCE™ MIDWAY

STRATEGIC SIMULATIONS INC

© 1983. All rights reserved.